Claims

1. A method of communicating traffic from a source to a group (G) of nodes including a Network Node (MNN) in a network using one or more multicast protocols, the network also comprising a Router (MR) for forwarding traffic between said network and the Internet,

   characterised by a Multicast Signalling Gateway (MSG) co-located with said Router (MR) and translating on an interface signalling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP).

2. A method of communicating traffic from a source to a group (G) of nodes including a Mobile Network Node (MNN) in a Mobile Network using one or more multicast protocols, the Mobile Network also comprising a Mobile Router (MR) for forwarding traffic between said Mobile Network and the Internet,

   characterised by a Multicast Signalling Gateway (MSG) co-located with said Mobile Router (MR) and translating on an interface signalling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP).

3. A method as claimed in claim 2, wherein said interface is an egress interface of said Mobile Router (MR).

4. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) operating on said interface determines whether said signalling messages relate to the group join class ({JOIN}) or the group leave class ({LEAVE}) and translates the class into group membership protocol (GMP).

5. A method as claimed in claim 4, wherein said determination of the class is made using a class table which provide the class as a function of the type of said signalling message.

6. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) operating on said interface determines whether said signalling messages contain an identification of a target multicast Group (G) and translates the target multicast group identification into group membership protocol (GMP).

7. A method as claimed in claim 6, wherein said Multicast Signalling Gateway (MSG) operating on said interface determines whether said signalling messages contain an address of a target multicast group source (S) and translates the target source address into group membership protocol (GMP).

8. A method as claimed in claim 7, wherein said Multicast Signalling Gateway (MSG) maintains source lists that include, for each MSG-enabled interface, said identifications of groups (G) associated with their respective multicast group source addresses identified by said signalling messages.

9. A method as claimed in claim 8, wherein said Multicast Signalling Gateway (MSG) renews the GMP subscription for said group (G) in response to a change in said respective source list.

10. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) renews the GMP subscription for groups and associated source lists maintained for said interface in response to a change of topological attachment point of said interface.

11. A method as claimed in any preceding claim, wherein multicast packets from a source external to said network to which said network is subscribed through the MSG-enabled interface are multicast-routed from said MSG-enabled interface within said network according to a local multicast forwarding table of said router (MR).

12. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) uses a "service interface" as provided by the

GMP protocols to generate the GMP messages, and thus to enable and disable reception of packets sent to specific IP multicast addresses by specific sources.

13. A method as claimed in claim 12, wherein said Multicast Signalling Gateway (MSG) aggregates sources for a given multicast group (G) and uses a single socket identifier (sid) to pass the whole aggregation.

14. A method as claimed in claim 12 or 13, wherein said Multicast Signalling Gateway (MSG) uses different socket identifiers (target_sid) for respective targets (source S, multicast group G) derived from said signalling messages.

15. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) detects Multicast Routing Protocol (MRP) messages by monitoring packets sent over the MSG-enabled interface.

16. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) is embedded within an extension of a multicast routing protocol (MRP) implementation.

17. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) translates multicast packets together with unicast source addresses and multicast destination addresses of multicast packets between IPv4 and IPv6 protocols.

18. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) translates IPv4 MRP messages into IPv4 GMP messages (that is IGMP messages).

19. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) translates IPv6 MRP messages into IPv6 GMP messages (that is MLD messages).

20. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) translates IPv4 MRP messages into IPv6 GMP

messages and enables IPv4 nodes to receive multicast packets from IPv6 multicast groups and sources.

21. A method as claimed in any preceding claim, wherein said Multicast Signalling Gateway (MSG) translates IPv6 MRP messages into IPv4 GMP messages and enables IPv6 nodes to receive multicast packets from IPv4 multicast groups and sources.

22. Apparatus for use in performing a method as claimed in any preceding claim and comprising said Multicast Signalling Gateway (MSG) co-located with said Router (MR) and translating signalling messages of a multicast routing protocol (MRP) into messages of a group membership protocol (GMP).